National Round Table on the Environment and the Economy
Table ronde nationale sur l'environnement et l'économie

Discussions on

DECISION MAKING PRACTICES FOR SUSTAINABLE DEVELOPMENT

Foreword by
Thomas A Moore

Sponsored by Procter & Gamble Inc

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Foreword

Making decisions is rarely an easy task. Making decisions which affect generations to come can be daunting indeed.

Only recently have people realized the devastating impact they are having on this planet. Now, through Sustainable Development policies, we have the opportunity to take corrective action.

That is why a series of handbooks like this is so important. Our generation, more than any other, must make critical and often controversial decisions about our future.

Until recently, the environment was largely an activist's issue. Times have now changed. The environmental movement is now part of the mainstream - everyone is affected.

In order to ensure that we make the right decisions, we need to understand how the issues interconnect. Only then can we assess the implications of our actions.

New technologies, like lifecycle analysis (LCA), help us to identify the environmental impacts of products - from the harvesting of raw materials to the disposal of waste. But LCA can only quantify the impacts - it cannot place value on one versus another. We, as companies and individuals, must make those choices for ourselves.

In the last few years, we have begun to see a consensus around the principles of Sustainable

Development and a new optimism for our survival.

This book provides a template for making those tough environmental decisions and outlines how one company, Procter & Gamble Inc., has made critical choices.

It is my hope that Procter and Gamble's support of this publication will help promote a better understanding of the principles of Sustainable Development and their application to the decision making process within organizations.

Thomas A Moore
President
Procter & Gamble Inc

Preface

The National Round Table on the Environment and the Economy was set up with a mandate to promote Sustainable Development in Canada, to advise the federal government on how to integrate Sustainable Development practices effectively in its own operations and planning and to act as a catalyst for action on Sustainable Development.

One of the challenges facing the National Round Table is the integration of Sustainable Development concepts and practices into the decision making processes of Canadian institutions.

One of the resources available to the NRTEE is the experience already gained by both public and private sector organizations in formulating and implementing environmental projects, programmes and policies for Sustainable Development. This book draws on the insights and experience of many of those decision makers.

Provincial Round Tables are also making important contributions in this area.

Round Tables on the Environment and the Economy in Ontario and in Nova Scotia have developed decision making principles for Sustainable Development.

The Manitoba Round Table set up a sub-committee to develop a Business Code of Practice Strategy Checklist for decision makers who want to incorporate Sustainable Development considerations in their organizational decisions. This checklist is intended

for business associations and private sector companies but it will also be of interest to public sector organizations.

A study, undertaken by Glenn Bridges for the British Columbia Round Table on the Environment and the Economy, examines a public sector decision making process used by the government of British Columbia.

Decision makers in both private and public sectors have indicated the importance of periodic reviews of decision-making processes, both to monitor ("are the decisions being carried out as intended?") and to evaluate (" do the decisions need to be modified?").

This continuing dialogue - among business, labour, environmental groups, and governments at all levels - has been of great benefit in the production of this book.

We hope that decision makers in both the private and public sector will find this book useful as they attempt to apply environmental considerations to the decision making process of their organizations.

George Connell
Chair
The National Round Table
on the Environment and the Economy

A Message from the Manitoba Round Table on Environment and Economy

Today, business is realising that economic activity depends on a healthy environment and that good environmental behaviour can pay off on the bottom line.

There is a real opportunity for business to take the leadership role in a new era of economic growth which promotes environmentally sustainable practices.

A key part of this shift to include environmental considerations in business decision making is the recognition that it is better to anticipate, prevent and/or mitigate environmental impacts than to pay the price at a later date.

A good first step is to adopt a Sustainable Development code of practice. Several national associations and companies have gone this route and have experienced a number of benefits. These include increased business opportunities, energy savings, material and resource use efficiencies and minimized risk and liability.

By adopting and implementing a code of practice, your association or business will be making an important commitment to Canada's environment and economy.

Lorne Ames
Chair
Code of Practice Sub-committee
Manitoba Round Table on Environment and Economy

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Introduction

This book explores how Canadian institutions can integrate Sustainable Development concerns into their every day management decisions. It applies to organizations at all levels and in all sectors: professional associations, labour organizations, businesses, governments and non-government organizations.

The discussion in the following chapters results from the experience of decision makers from across Canada and further afield who have been introducing Sustainable Development concepts, objectives and principles into the management practices of many different types of organizations.

Their attempts to change or influence their internal decision-making to address objectives and priorities related to the environment and Sustainable Development have been reviewed and analyzed in order to identify the common elements of any attempt to integrate Sustainable Development considerations into management practice. This analysis was based on four key questions.

1 *What drives or serves as the impetus for changing the ways in which decisions are made in a given sector?*
2 *What management strategies for bringing about shifts in an organization have proved successful?*
3 *What specific tools or devices have been useful for implementing new or different strategies?*

4 *What are the principal barriers to success which organizations have encountered?*

What emerged from the analysis was the complex nature of the exercise and several sectors identified the development of a Code of Practice as a useful management strategy in the integration of Sustainable Development and decision making.

The Manitoba Round Table on Environment and Economy has developed a Code of Practice for business managers. Although this has been designed with the business sector in mind, much of it is also applicable to the other sectors under consideration in this book.

A Code of Practice is an important method of ensuring that Sustainable Development principles are integrated into the decision making process of any organization.

As the Manitoba Round Table points out "the adoption of a code of practice can serve to:

- demonstrate senior management support for sustainable development action;
- encourage an open and thorough review of existing practices;
- identify opportunities to improve current performance;
- educate and inform employees and other organization stakeholders; and
- demonstrate public commitment to sustainable development."

Chapter 6 contains the Manitoba Round Table's Business Code of Practice Checklist for decision makers who want to integrate Sustainable Development principles into their organizational planning.

Another important element in integrating decision making and Sustainable Development, identified by several sectors, is the review process. In a report for the British Columbia Round Table on the Environment and the Economy, Glenn Bridges looks at the Energy Review Process that is used by the provincial government to evaluate and approve proposed energy projects.

Chapter 7 reproduces the basic review process outlined in the report and the suggestions for the potential improvement of the decision making process.

Chapter 8 outlines the attempts of Procter & Gamble to respond to Sustainable Development concerns in all aspects of their corporate decision making, the difficulties and the successes they have achieved.

There seems to be an emerging consensus that longer term planning is vital for integrating decision making and Sustainable Development. This movement away from short term crisis type decision making - and not just in the business sector - is likely to be as important for global competitiveness as it is for environmental considerations. We hope this book will help all those who intend preparing their organization for the greener, and maybe leaner, world of the 1990s.

1 What Drives Change?

What causes organizations to change the way in which they make decisions so their actions support the objectives of Sustainable Development?

Business and Professional Associations

Among the main triggers for professional and business associations are *environmental events, particularly those which attract media attention* and thereby contribute to growing public concern for the environment. The Bhopal and EXXON Valdez incidents were cited as examples.

Increased public awareness of the environment in recent years has made it easier for associations to integrate environmental and economic concepts into their decision making.

Associations recognize that they must develop their own and their *industry's credibility*, and address the issues as constructively and openly as possible. A loss of professional pride and "relevancy" is felt to be at stake if professional associations are unable to respond to the changing needs of society.

Associations view a strictly regulatory response to heightened public concern for the environment as "flawed" and "reactive to media". This serves as a second impetus for change: the desire to contribute to the formulation of "reasonable" regulations which affect associations' constituencies.

A desire to avoid legal costs and economic losses is

another stimulus for change, as is the converse: anticipation of economic gains and long-term benefits to society.

Leadership is also important; committed, *visionary leaders* in associations and member companies drive change in business associations.

Finally, new analytical technologies and the resulting data often trigger action. Scientifically sound knowledge of the environmental impacts of industrial activity and *new technologies* also spur environmental responses by associations.

Corporate Sector

In common with associations, simply the recognition that a problem exists can drive demand for change. This recognition may manifest itself as public concern, ecological disasters or the awareness of stresses on the environment. In many ways, discontent with the status quo resulting from *environmental crisis* and stress is felt at all levels of society, from consumers to corporate managers.

Public perception also plays a major role in corporations deciding to look at the "soft issues"; that is, issues that are not yet regulated. A corporation may simply consider it important to show leadership in environmental and Sustainable Development issues, while other corporations may lead in setting standards for particular services and areas of work as a consequence of specific incentives and requirements.

More commonly, however, the two prime driving forces for change in the corporate sector are fear of non-compliance with formal requirements, and the

need to manage the natural resources upon which businesses directly depend.

Management commitment is essential. In many instances, an individual high in the hierarchy, championing environmental protection and Sustainable Development, is a necessary precursor to change. It is vital that foresight, *vision and leadership* are provided from the top. Vision can be interpreted as the ability to take risks. Without this commitment, change will be impossible.

To be truly effective over the long term, however, the ownership of environmental concern must become widespread throughout the organization. When the problems are recognized by all, the need to find solutions becomes everyone's priority.

Sometimes, however, employees provide the initial impetus for change. Through employee pressure, many companies decide to re-evaluate their operations and practices either completely or in part.

Because financial self-interest and profit are prime motivations for change, action is unlikely unless *market opportunities* are identified, The results of discontent and environmental concern, however, lead to market opportunities for those with foresight and vision. Corporations must understand that it is in their own interest to work toward Sustainable Development. Historically, processes have been developed that have had an environmental benefit even though they were undertaken without any environmental reasoning. For example *economizing energy and resources* in the production of beverage containers has been undertaken for years to cut costs, while it is only in recent years that the environmental benefits have been considered.

Federal Government

Incorporation of environmental considerations into the policies and practices of the federal government will require fundamental changes in the government's decision-making processes. The initial stimuli for these changes are many and varied. To date, the most common stimulus has been crisis - *crisis of such proportions and concern to the "public"*, that fundamental reform is unavoidable.

Other important forces are political commitment and direction, public pressure, and the success of pilot projects that demonstrate how Sustainable Development concepts may be incorporated into decision making.

In the initial phases, when the validity of the concept of Sustainable Development is not fully accepted, serendipity or the chance occurrence of the right people together in the right place, may play a significant role in the move toward new decision-making processes.

Within government, sustaining the momentum of reform is more difficult than initiating reform. It is often suggested that increasing awareness through education will maintain the momentum for change. However, all changes involve risk to those who must implement them, and education alone cannot guarantee continued success of a program of reform since it does not overcome the risk to employees. Education must be accompanied by actions which demonstrate top-level commitment to the integration of environmental considerations into the development of policies and programs.

This commitment can be communicated through

the development of national strategies or goals for Sustainable Development. If national strategies include definite targets and deadlines, they will sustain the momentum for change. To ensure their effectiveness, national strategies may also have to create clear accountability of the government to the public, or be entrenched in legislation. The result of such legislation will be incremental structural changes to institutions, methods and processes in order to better implement the legislation. However, the authority that legislation can provide may, perversely, prove daunting to those who must implement it, thereby inducing paralysis in all but the boldest of managers.

Municipal Governments

For municipal governments, *leadership* in environmental issues and in integrating an environmental perspective in decision making, usually comes from elected local officials, particularly mayors. Committed municipal and regional bureaucrats can also generate awareness and the integration of environmental concerns, although bureaucracies can also stymie change.

As for some other sectors, a primary force driving elected officials is *pressing environmental issues* such as shortages of landfill space, closures of beaches, contamination of water supplies and waste management. In some municipalities, officials are being elected primarily on an environmental platform, and this is obviously creating a much greater impetus for a Sustainable Development orientation in decision making.

Although successful politicians are attuned to the grass roots, personal commitment and moral/ethical concerns are also motivations. There is increasing concern for present and future implications of environmental degradation, and greater acceptance that problems must be managed in the jurisdictions in which they arise.

Public pressure from the grass roots is an important stimulus for increased environmental orientation in municipal governments. Many concerns and demands arise from the grass roots, as well as from environmental and neighbourhood groups. However, some major issues have a low profile or are poorly comprehended. Also, public pressure may impede rational environmental decision making by municipalities. For example, the NIMBY syndrome can hamper genuine commitment to the rational resolution of certain problems.

The media can exert influence by informing the public about local environmental issues and initiatives in other jurisdictions, and by praising or indicting municipal officials on their attitudes and actions. However, the media focus is generally issue-specific, and focussing on a particular "hot" issue may divert energies from a more steady, consistent approach to environmental management.

Provincial policies and legislation motivate municipal powers to internalize a Sustainable Development perspective. On the other hand, provincial policies and regulations may impede municipal efforts. Such was the case when provincial insistence on a hazardous waste site designation thwarted a municipal/private sector initiative to provide battery drop-off bins at retail outlets.

The private sector creates many of the problems municipalities must manage. For example, the refusal of manufacturers to accept full life-cycle responsibility for their products produces enormous waste collection and recycling costs for municipalities. In general it was felt that the private sector, at present, provides little support for improved environmental decision making at the municipal level.

In some municipalities, the university community can play an important role by identifying, researching, and encouraging municipal governments to take a stand on environmental issues and opportunities.

Labour

Unions are in the business of responding to *workers' concerns*, protecting their interests, entrenching their rights and improving their prosperity. The environment is not a new concern for unions: for years it has been linked in committees and negotiations to health and safety matters. Ties with international labour organizations have resulted in ongoing concern for the security of the global environment. Environmental-related initiatives include a Canadian Labour Congress (CLC) committee's examination, in the 1970s, of how concern for the environment could create or eliminate jobs in Canada.

Concern for the worker is paramount in the minds of union organizers. This has generally meant that environmental issues are examined in concrete terms: who pollutes? who suffers? who pays? who regulates? and who enforces? what are the trade-offs? what is the bottom line? and, how much stress can the

environment tolerate before human health is threatened?

This emphasis has led to scepticism about decision-making methods evolving in the service of Sustainable Development. To the labour movement, a group of diverse stakeholders around a table - common mode of decision-making related to Sustainable Development issues - is not a team; it is a collection of vested interests with varying degrees of power. Consensus is not a deal, but a collection of compromises. Sustainable Development may well be contrary to workers' interests if it leads to a reduction in traditional wealth and, therefore, in worker prosperity. The "change" stressed in the Brundtland report - in individual practices, in decision making, in attitudes - may be at odds with labour's concern for workers' security if this change deflects attention from corporate responsibility.

Still, the labour movement's close ties to the public pulse and its concern that it "not be left in the cold" by social trends, have led to some internal developments in response to the wave of environmental concern unleashed by the Brundtland report. A recent poll of some CLC members showed definite interest in more labour participation in the environmental arena. The CLC has a new standing committee on the environment. Environment committees are appearing at the local and affiliate levels, and officers throughout the movement are adding environment to their other responsibilities. As well, labour is participating in stakeholder exercises such as round tables and the pesticide registration review process.

Of the forces driving change on Sustainable

Development within the labour movement, the will of the members is the most important: when the members want their union to act and respond, the union becomes proactive. Reactive change comes in response to *initiatives of other organizations:* to a government's decision to review pesticide regulations, to industry's intentions for nuclear power, and to *public outcry* about toxic loadings.

Labour also responds to international initiatives: to new Environmental Protection Agency (EPA) standards which might set a useful precedent, to a lack of US pesticide regulations which might threaten Canadian workers via the Free Trade Agreement. In addition, labour responds to individuals, i.e. activists within its ranks. One Congress leader, Jim MacDonald, was responsible for the Jobs and Environment Committee. When he retired, interest in the committee flagged, in part because of economic cutbacks. An activist in a shop can get reforms started.

Non-Governmental Organizations

Non-governmental organizations (NGOs) bring a different dimension to the table. Simply put, most NGOs are in the "business" of promoting Sustainable Development and, at first blush, it might seem that they do not "fit the mould" from which the other sectors are cast. The primary focus of NGOs is to influence the decisions made by others.

However, they too are having to adapt as *people become more aware of environmental issues*. Perhaps this is the chief stimulus for NGOs changing their approaches. Still oriented at the grass roots level,

NGOs are helping to create, and are dealing with more sophisticated areas of debate. No longer seen as being on the fringe, NGO's are being turned to more frequently as reliable sources of information and as *respected opinion-leaders*.

A consequence of the increased prestige is that the "stakes" are becoming higher as credibility increases. Another consequence is that alliances between NGO's and other sectors are now being formed.

Another stimulus for change in NGOs is *financial need*. The prospect of gain through endorsements was influential in the Pollution Probe decision to collaborate with Loblaws.

Many NGOs have specific mandates, and pursuit of these mandates continues to be the focus of their energies and methods of operating. If an NGO discovers a better approach for achieving its organization's goals, it will be applied.

Notes

Table 2 Successful Management Strategies

Business Associations	Corporate Sector	Federal Government	Labour	Municipal Governments	NGOs
• policy frameworks	• management vision	• new external organizations	• obtaining information	• management of the political process	• build trust within
• education	• foresight	• broaden mandate of government agencies	• dialogue with NGOs	• special purpose bodies	• work from the grassroots up
• research	• accountability	• appropriate geographic scope	• sharing knowledge	• building relationships with public	• awareness of linear thought
• pilot projects	• integrated planning	• long-term outlook	• planning objectives & strategy	• public consultation	• ecosystem view
	• participatory management		• testing authority & political commitment	• improved and more integrated planning	
	• global perspective		• adherance to priorities	• life-cycle approach	
	• stakeholder consultation		• worker education	• partnerships	

2 Successful Management Strategies

What management strategies for bringing about shifts in an organization have proved successful?

Just as forces giving rise to change are felt to be evolutionary, so too are the management strategies for integrating environmental and Sustainable Development practices into decision-making processes. But not all strategies would necessarily be successful across all sectors. In fact we found that successful strategies for integrating Sustainable Development practices into management decision making did vary across the different sectors.

Business and Professional Associations

Agreement on broad issues and corresponding strategies does not come easily in associations with broad-based or large memberships. Consequently, many associations follow evolving and incremental approaches. The following, however, are the strategies thought to be the most successful.

Associations can set standards of environmental behaviour within an industry or profession by providing *policy guidance* to their members. This involves collecting information so members can better understand the nature of and response to environmental issues; setting goals and targets for members; developing principles, guidelines and codes of practice; developing a monitoring and feedback

system; and making acceptance and implementation of standards a prerequisite for membership.

Educating members also helps to make the implementation of Sustainable Development successful. Education can take the form of meetings and forums, and is considered particularly important at the CEO level.

Many business associations are *conducting research* to enable their members to adopt Sustainable Development practices, particularly in areas where industry-wide benefits are likely to accrue and for which pooled resources are required.

Demonstrations of models or processes which foster Sustainable Development can show association members Sustainable Development success stories. The most persuasive demonstrations are interactive.

Corporate Sector

The key to affecting change in the corporate sector is *the establishment of a vision* and direction for the company, either through internal expertise or by enlisting the advice of outside experts. Management's intentions and plans must be explicit and made known to staff.

A second key is *the ability to turn an environmental problem into a market opportunity.* The length of time between achieving a market advantage and paying for a change in policy or direction is recognized as a major risk and often demands a high degree of foresight.

In addition, *systems must be put into place to ensure that policies are being carried through.* Goals should be set for staff and a method of measuring

their success initiated. Hard data must be obtained on a continuing basis in order to measure change and make assessments for future developments.

Sustainable Development cannot be seen in isolation or tagged on as a specific issue; all those responsible for *every aspect of planning* must take it into consideration. Sustainable Development is not just ecology; it is the nexus between economics and ecology, and therefore needs to be incorporated into all aspects of a business. Planning and development must be seen as a framework within which decision makers have to take into consideration the effects of their product or service on society. They must consider the total impact of producing and marketing a product, not just the opportunity for profit.

Once a vision has been established, *participatory management* is key to integrating Sustainable Development into any corporation's management strategy. A trans-organizational response is needed since solutions must come from the whole organization and beyond. There is some debate as to which levels within an organization may participate in decision making. Some feel that it is important to involve those from the shop floor through middle management; others that middle management is the key to strategic development. However, an effective communications strategy will ensure that all staff are informed.

Global issues need to be managed globally. This is a problem and major challenge since most issues within business are not dealt with at this level, and there is no existing infrastructure in which decisions on Sustainable Development can be made. There is a need to evolve decision-making processes that can

have an effect at the global level. Developing specific goals for global change, while remaining competitive internationally, is a major challenge facing all international organizations.

Stakeholder consultation is seen as vital. In the past, the common approach has been to identify problems and then impose solutions on the community. The move to consultative approaches stems from an altered understanding of the implications of the democratic process, and the concept of the rights of the individual. Communities now regard themselves, and are regarded by others, as having a right to participate in decision making.

The strategy for managing change in the corporate sector might be summarized as: *concept → consultation (internal and external) → consistency → communicution → control → credibility.*

Federal Government

Federal government management strategies fall into two broad categories: methodological (e.g. better cost benefit analysis) and institutional (e.g. changing the machinery of government).

The challenge in methodology lies in translating the complexity of Sustainable Development into tools and directives that can be followed by managers. The problem is that new ideas and processes are often resisted when introduced into an existing system.

In order to integrate environmental considerations into decision-making processes, management strategies must first address change at the institutional level. If successful at this level, new methodologies should follow naturally to complement

the revised outlook of the institution. The question then becomes: "What aspects of the institution require change?" and "How to effect that change?"

Institutions operating within the status quo cannot be expected to change the status quo. *The need to create new organizations outside the existing institutional framework*, to serve as catalysts for change within, might therefore be necessary and appropriate.

However, it is not certain that a body external to the system will effect the fundamental internal changes required to incorporate Sustainable Development. Whether the traditional incremental approach to institutional change will be sufficient, or whether wholesale and likely disruptive reorganization of the government is required, remains unclear.

Broadening the scope of a department's mandate to consider environmental consequences, especially when these affect other departments, is not encouraged by the existing compartmentalization of responsibilities. Environmental considerations will be incorporated into the decision-making practices of managers either when those considerations are enunciated within the core mandate of the department, or when they are specifically delineated as criteria for performance review.

The spatial scale at which problems are addressed may have consquences for the success of programs developed to solve them. Smaller geographical planning units tend to have increased commonalities, and, therefore, consensus building and commitment are more easily achieved. Action at the regional level is more likely to achieve the degree of consensus

required than action at the provincial or national level. On the other hand, and as seen within the corporate sector, some problems, such as ozone depletion or global warming need to be addressed on a global scale. Recognizing the need for appropriate scales from the outset may improve the chances for success, although jurisdictional divisions among the various levels of government may make this difficult.

Ultimately, the difficulty of incorporating Sustainable Development into the decision-making processes in the federal government and in other sectors, derives to a great extent from the conflict between the short-term outlook of the government and *the long term outlook* that is, by definition, Sustainable Developmcnt.

Labour

At the policy level, strategies for implementing Sustainable Development include *obtaining the best information available, dialogue with non-governmental groups* with related expertise, *sharing knowledge and opinions with others* (individuals, groups and media) both within and outside the movement, *careful planning of objectives and strategies, testing relevant political will and commitment*, and questioning authority.

Selectiveness is important: labour must keep its *priorities* straight and protect its resources and this means that sometimes it may not be able to get involved. Most important is *worker education* - keeping workers informed increases the quality and value of labour decisions.

The levers labour organizations have are few.

Environmental conditions could be added to bargaining positions (and are being addressed more and more in negotiations). But except in extreme circumstances "no one's going to walk for the environment" - security, pension, wage issues are simply more important. Whistle-blowing is also possible, but there is too little protection for whistle blowers in Canada to make it a common way of countering environmental infractions.

A powerful, informed activist in a shop can make a difference in improving employer response to worker concern for the environment. Information itself is not enough to change bad environmental situations - there must be a worker with an inclination to complain about a situation or nothing will ever happen. One role of a union is to identify such individuals and empower them by providing them with background information and basic research skills.

It is always important to garner information. A situation was described in one NRTEE workshop of a worker keeping notes on environmentally questionable situations and practices in his plant; for the sake of his job, he did not blow the whistle, but let it be known that he had a report and would use it if ever an incident occurred which posed a threat to worker safety.

Union organizations place great emphasis on research and expert knowledge. There is a long tradition of questioning government and corporate information - of getting the facts.

An environmental bill of rights with some "teeth" could go a long way to increasing workers' confidence in their responsibility for the environment when it is

in contradiction to their responsibility to their employer. A worker may be unhappy about turning the tap that lets toxins loose but he will continue doing it until it is illegal - because workers do not have the means and methods to circumvent irresponsible employers, and consequently must carry out such acts.

Municipal Governments

The principal strategies for integrating Sustainable Development relate to *management of the political process* and *public participation*. Elected municipal officials are the most directly accountable level of government, so action or inaction on environmental issues can be seen clearly.

In some cases, however, the decision-making process must be managed to allow for environmental action without requiring "political suicide" by elected municipal figures, and this may require that some issues be moved to another decision-making level or process, and perhaps out of the political forum altogether. For example, many "municipal" environmental issues, especially those involving the development of major infrastructure or the imposition or increase of taxes or fees, are politically easier to deal with at the regional level.

The unfavourable aspect of this strategy, of course, is the scope it provides elected municipal officials for "passing the buck."

Strategies must be adapted to the realities of the political culture. A "cautious" or otherwise unreceptive municipal or regional council (which is reflective of an electorate of similar disposition) might

need to be coaxed along in small, incremental steps.

The role of, and relationship with, the public must also be "managed" to promote a positive rather than detrimental influence on municipal environmental decision making. The promotion of "high-appeal" projects such as municipal composting and blue-box recycling, as well as the development of small or short-term cooperative initiatives with neighbourhood associations, are ways of building positive relationships with the constituency around environmental issues .

The establishment of citizens' environmental advisory committees has proved to be a successful means of ongoing, informed, public input for some municipal and regional governments. On the other hand, requirements for ongoing public participation may, in some cases, (e.g. during very formative stages of facility siting) result in a process in which resolution is, if not impossible, at least extremely time consuming and costly.

Environmental sensibilities and goals must be integrated into the planning process. Municipal state of the environment reporting is a means of tracking trends and identifying key issues. Clear identification of issues, circumstances, potential avenues for problem resolution, and identification of responsible parties is a necessary basis for good decision making.

Fall-out from environmental problems generated at other levels must often be dealt with at the municipal level. Although it is often not possible for a municipality to address directly the genesis of these problems (e.g. household waste), *a life-cycle perspective* can help to clarify alternative "supplementary" approaches. The need for a new mind set based on a

life-cycle philosophy is evident. Industry must be responsible for the problems it generates, with control exercised at the market level.

The building of good partnerships (e.g. provincial-municipal, municipal-private sector) is important. While some municipalities are, "staffing-up" to handle environmental management needs, others are relying to a greater extent on the private sector, particularly in terms of the management of the more technical aspects. *Special purpose bodies* are another approach.

Non Governmental Organizations

NGO decision makers identified many important strategies for successful management in the NGO sector. These are grouped below into the four basic areas of "strategic orientation," "people management," "view of the world," and "strategic positioning."

Strategic orientation

NGOs are not, conventionally speaking, in the business of producing a particular product or service. They are, as mentioned previously, normally associated with promoting a cause or causes in relation to an issue. Consequently, a significant amount of emphasis must be placed, in any NGO, on defining a vision of the what that NGO is attempting to achieve, and how best to carry out its mission. Clearly important to NGOs is the need to maintain integrity of purpose and manner of operation; that is, to ensure that independence from other interests is maintained, and that outward credibility remains sound.

It is therefore particularly important for NGOs to:

- clearly identify objectives of and for change and to identify and articulate issues and goals related to these changes. This is true for all. types of change: change in strategic direction, change in affiliation with others, and change in management and operations.

- tailor initiatives and programs to fit the size and nature of the organization. Overly ambitious goals and programs which draw an organization away from its original purpose can cause significant stress. Organizations must recognize their "limits" in terms of resources and credibility, and not pursue issues or goals in a heedless, mechanistic, "driven" manner, disregarding the signals that limits are being reached.

- seek more integrative approaches for operating. Cultural and biological issues do not often coincide with arbitrarily imposed boundaries. NGOs recognize the *need for constructing and acting on their agendas at more than one level*: at the level of the ecosystem, and at the level of the jurisdictions within which, and with whom, they must operate.

People management

As is the case for any organization, successful NGOs are successful because of their people. Wages are typically low, and many rely upon the energy and commitment of volunteers in order to function. Strong leadership is therefore crucial, as is the need to build

consensus within the organization before and while changes are being made. Important strategies related to people management within NGOs, include the following:

- It is important to *build trust within organizations* and with the people/ organizations with whom they deal.

- NGOs must be flexible in the management styles they employ. The values of the members and employees of an organization, who may come from different cultures and range widely in age and experience, must be accommodated and, indeed, may provide a wellspring of valuable insight and capability.

- Open attitudes and management styles bring with them an element of risk. By building awareness and involving people in making changes, one raises the possibility of losing "control" of the management process, possibly leading to unpredictable results. As mentioned above, however, it ought to be considered that this is not necessarily a negative consequence.

- The whole "team" within an organization must be clear on what the management structure and method of functioning is. It is also important to be sensitive and *recognize signals for change from within* to determine if management systems and approaches are functioning smoothly, and whether changes are warranted.

- A successful NGO values input and ideas from all sides of an issue or position. It also strives for balanced representation in its staff and membership. The challenge for NGOs, and the source of strength and relevancy for many, is the need to draw people having different viewpoints together, and to encourage a range of thinking towards value changes.

View of the world

NGOs have profited from, and will continue to profit from, operating from a perspective that links international issues with local issues, Many have learned to "think globally and act locally" and this orientation has permeated the way they do business.

Other significant elements of the NGO view of the world are discussed below:

- It has been suggested that *the "Western" way of thinking dominates current decision-making practices, and that this mode is quite limited.* For example, the "long-term" is often considered to be the next five to ten years but there are other models which have much to offer. A different model, for example, is employed by the aboriginal community which looks to the seventh generation as being the "long term" and also looks back into the past many generations.

- Other differences between the western and aboriginal views are exhibited in the tendency to approach problems from a

"dichotomous" viewpoint: for example, "jobs versus the environment". It is important in NGO circles to avoid "you/us" thinking, polarization and hardening of positions, and to encourage others to do the same.

- NGOs should be aware of different models and be prepared to incorporate them into their management processes; they should integrate the linear "corporate" style with alternative approaches.

- Another important strategy employed by NGOs is to involve communities in their work, rather than to exclude the general public from their planning and programs. Individuals, groups and organizations must feel ownership of the process NGOs apply in working towards their public goals. For NGOs to be successful, members of the public must be encouraged to take responsibility for the future through participation. Part and parcel of this is the need to discuss and share information with all stakeholders.

Strategic positioning

NGOs play a role almost in counterpoint to that of the other sectors:

- Because they are issue oriented, they must necessarily be proactive in defining and acting on their agendas. Any NGO that "waits for an issue to happen" will lose its constituents, its credibility and its effectiveness.

- In concert with being proactive, NGOs must take advantage of every opportunity that arises to achieve their goals. This means forging alliances with other sectors when it is profitable to do so. At the same time, as pointed out above, NGOs must be cognizant of the fine line that exists between working in harmony with others and being co-opted.

Table 3 Tools for decision making

Business Associations	Corporate Sector	Federal Government	Labour	Municipal Governments	NGOs
• executive committees	• incentives	• full involvement of managers	• commitment	• clear policies	• consultation before meetings
• special environment sections	• performance review	• incentives	• links to outside groups	• state-of-the environment reporting	• awareness of cultural differences
• new organizations	• advisory panels	• performance review	• established procedures for information release	• environment committees	• moving beyond the "comfort zones"
• award programs	• 3rd party reviews	• better information flows	• firm operating procedures	• citizen advisory councils	• appropriate meeting settings
• code of practice	• planned information flow	• x-sectoral consultation		• codes of practice	• promoting interaction at all levels
	• training	• training		• performance appraisals	
	• monitoring & evaluation			• inter-municipal co-ordinating bodies	

3 Management Tools

What specific tools or devices have been useful for implementing new or different strategies?

There are many instruments for effecting change, for collecting information and ideas to describe and promote change, and for setting criteria to define change. This chapter looks at the tools that have been developed by the various sectors.

Business and Professional Associations

Executive level committees with focused objectives are a common tool used by industry associations to develop *codes of practice* or advise on environmental concerns.

Professional associations that have difficulty integrating environment and Sustainable Development issues often create *special sections* to address these areas. Environmental law and environmental accounting were cited as examples. Large associations, in particular, may take on new staff to address environmental concerns.

New organizations have been created specifically to address environmental or Sustainable Development issues. This is also apparent at the international level.

Awards programs can spur association members to move forward.

Corporate Sector

In the corporate sector, management tools range from such obvious means as *cash incentives* for ideas to *performance reviews* involving discussions about environmental issues and personal performance. Another tool is the use of *advisory panels*, with both internal and external membership, to allow consultation on a wide basis, both within the company and externally, to achieve a workable plan.

Third party reviews can provide an unbiased view. Another tool to promote change, which attempts to avoid threatening or imposing views, is *the use of discussion fora*. These fora allow input from both senior management and line workers and, in doing so, allow for concepts to be internalized and accepted as their own.

Comprehensive communications planning is essential. Corporate and public education is also crucial to the success of any strategy.

Training programs allow management to provide the necessary information to facilitate change in an organization's behaviour. Courses can provide the rationale and the knowledge essential to encourage an individual or organization to change its practices.

To manage and sustain change, it must be *monitored and evaluated*. Because Sustainable Development is an inexact concept, and a process as much as a goal, it is vital that indicators be developed and applied to show progress and direction.

Measurement systems include compliance, acquisition and improvement audits. Whether or not audits are self-imposed or externally driven, what is important is who sees the results, who is responsible

for them, and what action is taken. External to an organization are biosphere indicators, state-of-the environment reports, and alternate forms of national accounting. These are important because of the need to measure accountability and ensure that internal audits ask the right questions - questions that relate to Sustainable Development, use of resources, product design issues, waste reduction, etc.

Because Sustainable Development is a strategic planning issue, it should be mandated from the top. Middle managers must be confident that their efforts to consider Sustainable Development, when engaged in planning and strategic development, will be supported. The use of this criterion in evolution and performance appraisals will reinforce the view that it is the responsibilty of the individual to integrate Sustainable Development principles into his or her working life.

Education and communication are vital in assisting employees and managers to understand their roles and responsibilities.

Federal Government

Any new policy objective carries an element of risk for those who are charged with its implementation. The perception of risk by managers can be reduced by *involving them in the development of solutions.*

Rewards and incentives must be created to offset the risks to managers associated with incorporating Sustainable Development into their decision-making processes. At present, performance is assessed according to the core mandate of the department.

While enunciating the concepts and practices of

Sustainable Development within the core mandate of federal agencies is certainly to be desired, *the addition of environmental criteria to performance requirements* is a more direct incentive to managers. The difficulty lies in how to integrate these new criteria into the existing system.

If individual managers are to be held accountable through performance review for their ability to adopt Sustainable Development concepts and practices, then so too should the federal government as a whole. Performance review of the actions and policies of the federal government is ultimately the task of the public. In order that this review be both effective and timely, the actions and the rationale for the actions taken by the federal government must be transparent. The *better informed* the public, the higher the quality of comment and criticism they are able to provide.

Because of the nature of Sustainable Development, the desire to have decisions reviewed by interdisciplinary review bodies increases as personal responsibility for adopting Sustainable Development principles increases. The need for managers to consider all the possible impacts of their decisions could result in a proliferation of these interdisciplinary groups in departments, and a consequent slowing down in the rate at which decisions are made.

In some cases, review bodies of this type could undermine cross-fertilization and communication between departments, and duplicate existing resources. Existing resources therefore should be used where possible, and *better channels of communication* should be forged between departments in lieu of establishing new bodies.

Cross-sectorial consultation is extremely important to the successful implementation of Sustainable Development in decision making, but when to consult, with whom, and how much, needs to be determined.

Because implementing Sustainable Development in decision making requires a multidisciplinary approach, a new mix of professional skills, and perhaps even new skills, will be required of managers. Managers with a wide range of knowledge, expertise, and contacts are required.

It is not clear whether *education and retraining* will be sufficient to upgrade the skills of present managers to enable them to implement Sustainable Development successfully. If, in fact, retraining or upgrading are up to the challenge, the cost might be prohibitive because of the scale of the retraining necessary. Nevertheless, there is no doubt that new approaches to training managers are required.

Labour

The tools that labour can bring to better decision making for Sustainable Development include *committed workers and staff*, practical experience with negotiations, *links to outside groups* and *established procedures for information dissemination*. *Operating procedures are particularly important*, as they are firmly entrenched and strictly observed in the labour movement. Staff, officers and representatives take their responsibilities seriously, are assiduous in their preparations, and are careful about what they sign. These procedures work well when Sustainable Development questions are being addressed.

Municipal Governments

Tools for ensuring effective integration of environmental and Sustainable Development concepts at the municipal level include:

- Articulation of *clear policies* that enable goals to be visualized, directions set, and progress gauged.

- Use of *state-of-the-environment reporting* to track trends and ensure timely identification of issues.

- Establishment of an *environmental committee* charged with renewing municipal actions and issues from an environmental perspective.

- Establishment of a *citizen's environmental - advisory council* to draw on the knowledge and expertise of citizens and assist in ongoing communication with constituencies.

- Development of an *environmental code of practice* for municipal bodies.

- Use of staff and departmental *performance appraisals* to monitor adherence to codes of practice, and encourage initiative.

- Establishment of, and/or participation on *intermunicipal co-ordinating bodies*, to share experience and clout. For example, groups like GIPPER (through which municipalities

of the Greater Toronto Area coordinate procurement policies) enable municipalities to send clear, influential messages to the private sector and to other levels of government.

- Making direct challenges to inappropriate policies, legislative constraints, etc.

Non-Governmental Organizations

In the NGO sector, specific tools or approaches available differ from other sectors and include the following:

- Before meetings, it is useful to *gather participants together* to "centre" into issues, especially tough and difficult ones. Methods that have been successful include meditation for a few minutes to allow individuals' energies to be more directed towards consensus. In some models participants are brought together beforehand for hours or even days to "centre" and come together as a group before dealing with specific issues.

- Participants in decision-making groups should *be aware of language use* and meaning and how this can influence outcomes.

- Effort should be made to *move people out of their "comfort zones"* of thinking and looking at issues. Encourage them to consider other perspectives and options and work towards

something that is greater than just self-interest. Often, this requires "behind - the - scenes" nurturing of meeting processes and participants.

- Meetings, sessions and other decision-making groups, when dealing with environmental issues, profit from being held in an *environmentally appropriate setting:* out of doors, near trees and plants, in rooms with windows, etc.

- Participants should be encouraged to *interact with each other on more than just the intellectual level.* Collaboration in activites such as working together at some physical activity can translate into a quantitatively improved working relationship on the job.

Notes

Table 4 Barriers to Success

Business Associations	Corporate Sector	Federal Government	Labour	Municipal Governments	NGOs
• legislative	• economic viability	• view of management accountability	• opposing views	• NIMBY syndrome	• resistance to change
• regulatory	• information overload		• performance reviews	• institutional inertia	• poor internal information flow
• limited understanding	• apportioning costs		• limited resources	• poor consultation	• competition for funding among NGOs
• fear of liability	• establishing partnerships		• constraint of consensus	• turf wars	• lack of good managers
• low stakeholder trust	• changing attitudes		• lack of experience	• limited funds	• lack of vision and leadership
• resistance to change	• absence of performance standards		• low profile	• time frames	• tunnel vision
	• unlevel playing field		• ground-level decision making		
	• lack of understanding				
	• long planning horizon				

4 Barriers to Success

What are the principle barriers to success that organizations have encountered?

A number of problems surfaced regarding the routes to and the means of effecting change in decision making to integrate Sustainable Development practices.

Business and Professional Associations

Several barriers were identified for business associations:

- *Legislative* barriers in laws establishing professional associations.
- Barriers within the environmental *regulatory* framework such as the emphasis on clean-up or treatment of environmental problems, instead of prevention.
- *Limited understanding of risks, costs and benefits* of the different alternatives that may be available to address specific environmental problems, as well as of the linkages between different environmental problems.
- *Fear of liability* associated with releasing information. While avoidance of liability was

seen as a stimulus for change, the fear of liability also creates a barrier, particularly in the release of information or in substituting new products or technologies for old ones.

- *Low stakeholder trust.* The low credibility of industry in the eyes of stakeholders is seen as a major barrier for associations in integrating Sustainable Development into their decision making processes.

- "Old-guard" or internal *reluctance to change.* Conservative elements within the membership of associations block changes that would shift the association away from the status quo.

Corporate Sector

In the corporate sector, a significant barrier to success is the often *prohibitive cost of changing policies* and the threat to economic viability and jobs that that cost represents. This problem is even more striking given that the pay-off from integrating Sustainable Development practices is unpredictable.

An additional difficulty is *keeping abreast of the growing body of literature* on the subject. Knowing what to do and how to do it is perhaps the single most time-consuming endeavour. It is simple to say that, "Yes, we are committed to the environment and to changing our practices", but the challenge lies in the "what" and "how".

Understanding the bigger environmental picture and how each organization fits into this, and further how to explain this relationship in understandable

terms, has proved to be a limiting factor. There is a need for easily understood and accessed information sources.

In a de-centralized company, *budgeting for change presents large problems*. How do you convince one business unit to pay for something that will benefit another unit?

Getting all parties to agree to adopting practices that will be more costly and only benefit the environment is a difficult hurdle to clear. Achieving harmony between investors, shareholders, senior management and line management is yet another organizational barrier.

In the past, business revolved around economic and technical issues. Now, the environment has evolved as a third aspect. Corporations must integrate environmental concerns into strategic planning even though, for some businesses, these concepts seem to be diametrically opposed to business sustainablility. Additional barriers are linear thinking and *entrenched management routines and habits*.

For many corporations, there are no governing standards and, where standards do exist, limited consultation is sought. In the *absence of standards* will all corporations set their own? To what level will they establish self-regulation?

When companies are functioning on a small profit margin and competing with those in developing countries, additional costs, such as those incurred to meet national environmental standards, can eliminate profit margins. More generally, *the competitive nature of companies* will make it difficult for corporations to change their polices to work with competitors. The tendency is likely to change policy

to attain a competitive edge, rather than to address global or local needs and work cooperatively. Structural disincentives, such as the existing systems of accounting, taxation and grants, all work against Sustainable Development, as do government decision-making processes.

What is Sustainable Development? Because the goal is not (nor can be) defined, it is difficult to define policy and direction. Equally, there is likely to be conflict regarding the pace and direction change should take. Although is seems to contradict a point made previously, some hold the view that *poor understanding of Sustainable Development* among the public makes it difficult for corporations to justify action.

Sustainable planning means *having to plan for the entire life of a product*. This is not only costly but also difficult - "short-term pain for long-term gain". So much of Sustainable Development is a leap of faith, that corporations can never be sure that the long-term gain will even occur, let alone be worth it in the short term.

Federal Government

To evaluate how well new decision-making processes incorporate Sustainable Development principles requires measurements which indicate the effectiveness of the changes made. However, determining the cause and effect relationships between the actions taken and the changes in the environment observed is difficult.

These difficulties limit accurate assessment. It is impossible to guess just what would have resulted

had alternatives been implemented, or had no intervention been made at all. The true "avoided costs" that accrue by implementing Sustainable Development principles cannot be known precisely.

In the federal sector, *managers want to be held accountable for only those factors over which they perceive they have control.* However, the all-encompassing nature of the environment precludes managers having more than fragmented control over a small number of variables. At present, only the activities within the control of the manager are normally used as indicators of the successful implementation of a program. Conversely, the results of those undertakings which are not directly under the control of the manager are less often used.

Since we are looking ultimately to the continued viability of ecosystems, and not to our ability to successfully carry out a prescribed set of activities, indicators must change to reflect environmental quality, and not successful project implementation. In the absence of a complete understanding of the ecosystems being affected, indicators must be chosen which best correlate with our understanding of ecosystem viability. Constant review of the appropriateness of these indicators for measuring environmental health is required.

In the end, it may not matter how accurately the indicators of success measure the continued viability of the environment if managers choose not to use them. Managers do not always use the indicators available at present, preferring the advice of trusted colleagues or their own knowledge of the subject as the basis for decision making. The value of increasing the quantity, and even the quality, of information

made available to managers may be questioned in light of this observation.

Labour

Several barriers and constraints have been raised by the labour sector:

- A perception of entrenched power in *opposing interests:* that corporations conventionally resist labour participation on environmental questions;

- *Limited resources:* money, time, staff;

- The *unnatural pressure to reach consensus;* the occasionally under-developed rules of multi-stakeholder exercises, exemplified by the soft language in the environmental arena: an exercise in licensing pollution is called a "regulation review", and where "waste management" replaces waste reduction;

- *Lack of experience* in dealing with many narrow and limited interests at one time; *the priorities of collective bargaining,* which mean environmental concerns usually take a back seat;

- *A low public profile* for labour concerns and priorities;

- *Weakness in the area of "ground level" decisions.* Should workers dump effluent?

Can they condone inadequate controls? What are the responsibilities of workers in the nuclear industry? At this level labour has very little power and workers can be subject to "job blackmail". Proper and adequate enforcement of industrial compliance to environmental regulations would greatly increase workers' confidence in their responsibility towards the environment.

Municipal Governments

In the municipal sector, several barriers were identified:

- *The NIMBY syndrome* brought about by a lack of real commitment to problem resolution: failure of public process. Unmanageable demands on political decision maker; and the tendency of politicians to focus on easier and "nicer" environmental actions;

- *Institutional inertia*, inappropriate regulatory frameworks and rigidity in quasi-legal decision making processes were cited as a second barrier brought about by municipal bodies incapable of responding quickly enough to the needs at hand; bureaucratic resistance; and slow learning in the face of fast-evolving needs and expectations;

- *Lack of a comprehensive perspective* is a third barrier and results from the absence or inadequacy of cost-benefit analysis; and the

absence or inadequacy of consultation;

- *Turf wars* and buck-passing impede coordination, delay the resolution of often rapidly escalating problems and result in a loss of public confidence;

- Difficulty of reallocating resources in the face of rising demands and *limited funds* are a constraint on action, both in real terms (insufficient resources), and because of the perception in bureaucracies that environmental needs provide opportunities for expansion, while in fact creative, low-cost solutions are possible and desirable;

- The time required to address the infrastructure requirements of these types of municipal environmental issues may be considerable. Frequently, material constraints or problems reach actual or perceived crisis proportions before being addressed.

Non-Governmental Organizations

Seen from without, a principal barrier in the NGO community could be considered to stem from a ecrtain *reluctance to shift the balance in their role from advocacy to participation*.

Seen from within, the principal barrier might be considered to be *financial pressure* - making ends meet - a condition that often seems to necessitate quick decisions.

Other barriers are:

- *Resistance to change* within an organization or perceived disruption of the status quo;
- *Not keeping everyone concerned, involved and informed* about imposed or impending changes;
- *Competition between NGOs for funding* and for influence;
- *Lack of good managers* in management positions, as opposed to people who care about the issues and the cause;
- Trying to maintain *a moderate middle-of-the-road approach*, which often alienates both extremes of opinion in an organization;
- *Inappropriate use of language* in communicating ideas;
- *Unwillingness to move out of the organization's "comfort zone"* of ideas and perspectives (as well as not looking at other perspectives);
- *Lack of vision* and leadership at all levels;
- *Lack of a strong community/cultural base* that provides the maturity and confidence to deal with environmental /societal situations that will occur on a broad scale, especially in the future;

- *Lack of good negotiating and other skills* necessary to influence major actors;

- *Lack of goodwill* on all sides of the issue to see a positive equitable conclusion;

- Obsessive application of *linear thought* to problems: commitment to linearity or "tunnel vision";

- *A low level of influence in society*; i.e. the relatively higher level of credibility and "air time" afforded the business and other sectors, as compared to the less formal and more grass roots level organizations and interests.

5 Changing Decision Making

A Complex Process

There is much activity within organizations and groups as they respond to calls for Sustainable Development, and to increasing concern for the environment on the part of the public.

Changing existing decision making practices is a complex and ongoing process. Companies, agencies and organizations will alternate between responding to external and internal factors, taking the lead in some cases and following in others, and then responding again to new needs as they arise.

Change needs to be accompanied by rising standards of management practices across the board, including the development of leadership qualities, better and wider decision-making processes, and improved research and development.

Looking Outside the Organization

The interaction between sectors and its implications for changing decision making cannot be ignored. A strategy for one sector may be a barrier for another. The actions of one level of government, for example, may pose difficulties for another. It is difficult for decision makers to look beyond their own sector.

People are conditioned to respond to external environments. This is particularly true where the environment and Sustainable Development are

concerned. People tend to want to talk about how their decisions affect the *outside*, and desire to be seen by others as doing the right thing. To a great extent the sectors represented in this book are in the business of influencing others.

Yet to understand the changes taking place *within* organizations, it may be necessary to observe directly what is happening from inside these organizations.

What is perhaps most striking, is not the differences between sectors, but rather the numerous similarities among them: they share common forces for change, strategies, tools and barriers. As well, it is clear that each sector has much to learn from the others.

Clearly there has been and there will continue to be a great deal of thinking, rethinking and action in all sectors concerning the environment. Perhaps the single thought that best summarizes the challenge, of Sustainable Development, is that environmental issues have no single home. Ownership lies with every individual, every corporation, every country. The outlook, methods and strategies of one sector inevitably affect those of another.

Common Concerns

The most common stimulus for change appears to be *the effect of crises* or extreme environmental events which demand attention. Public perception on a given issue, and on the capacity and will of the various sectors to respond, is also important.

Leadership is another common theme. Leadership in municipalities comes from politicians; there will not be any action taken on an issue unless the

politicians are aware and prepared to act.

In the corporate sector, leadership from the top is obviously crucial, but there are examples where the call for action has come from the employees themselves. Leadership also comes from "champions" in the senior ranks who work for senior management acceptance of environmental initiatives.

The NGO community tends to differ most from the other sectors: what works best for some is grass roots involvement in the setting of priorities and planning for action. Leadership seems to be manifested in the ability to involve people, engage them in the issues and find the most appropriate form of action.

In government, notwithstanding the importance of political leadership, direction comes primarily from senior management. A significant barrier, however, is the difficulty in generating and sustaining momentum for change. Managers resist being held accountable for anything not clearly within the purview of their immediate responsibilities, whereas responding to Sustainable Development requires moving outside of traditional roles and linear responsibilities.

Economic factors are clearly important to all sectors. In business, an impediment to change is that it may be seen as costly, risky and having little short-term benefit. The business environment does not make it easy to risk competitive advantage today for the greater good and, only possibly, stronger competitive positioning tomorrow.

Interestingly, this time-frame question figures significantly in the case of the federal government, but perhaps for different reasons. Ultimately,

successful change at the federal level will depend on the resolution of the conflict between the present short-term outlook of the government and the long-term outlook implicit in Sustainable Development.

If financial considerations are impeding change, they are also forcing change. Decisions are partially driven by financial institutions who now consider environmental risk, both short- and long-term, in making decisions.

For NGOs, money is clearly a constraint, and because it is so limiting, it is also a significant "driver of change". There isn't enough money to afford NGOs the luxury of highly trained managers and sophisticated management systems to enable them to operate in as smooth a fashion as they would like. Perhaps because of this, NGOs seem to adopt more participatory styles of management and interaction. Of all the groups, NGOs raised the greatest number of examples of strategies and management tools, perhaps reflecting the adage that necessity is the mother of invention.

Stakeholder Consultation

Interestingly, other sectors - associations, municipal governments and corporations - are discovering the value of involving other stakeholders through consultative committees and other vehicles and appear to be moving closer towards the NGO "grass roots" model to some extent. Here is one place, however, where conflicting views between sectors is apparent. While stakeholder consultation is seen as being fundamentally important as a strategy in the corporate sector, it is viewed with scepticism by the

labour sector who have raise the problem of "tyranny of consensus". In the labour sector, the interests of workers are paramount. In the environmental context, this acts both as a stimulus and as a barrier to change, depending upon whether the change is considered directly beneficial to workers or not.

Also significant is that some good ideas on multi-stakeholder interaction are suffering from institutionalization. Consequently, some corporations and NGOs are getting together outside of the very institutional structures that were created precisely to enable consultation to take place.

Organizational Structures

The way in which institutions are organized can both impede and promote change. Even within sectors, there is much variation: one corporation may be based on discrete management units, whereas another may be hierarchical. More investigation of the relative advantages and disadvantages of alternative structures would be useful. It might be expected that the former structure would encourage participation and "buying-in" to change, whereas the latter might facilitate leadership from the top levels down.

The size of an organization may also have a strong influence on what will give impetus for change and how it will be brought about. In the NGO sector, some groups are finding management more and more difficult as expectations grow, and as support and their constituencies increase.

Regardless of what else might drive change in organizations, many are responding to the Sustainable Development "revolution" because it is

seen as the "right thing to do." In each sector, there are organizations leading the way to more environmentally compatible approaches to doing business, approaches more in line with Sustainable Development principles. There is more and more evidence of "thinking down the road." But within sectors, some fields are moving more quickly than others.

Chapter eight looks at the experience of one such forward-looking company - Procter & Gamble.

The concept of "vision" or longer term forward planning is also seen as important - the need for it, its value, where it must come from, and how it must be applied. Some corporations are not just looking to tomorrow to stay out of trouble. For example, one chemical company has made it routine to report to the public every time an accident occurs. Companies are beginning to look down the road and are progressing along the line from environmental protection through environmental management to Sustainable Development. They are trying to determine the kind of business they will be in in the future: businesses that have integrated Sustainable Development principles. In short, they are adopting a proactive long-term strategic outlook.

6 Code of Practice Checklist

In 1987 The National Task Force on Environment and Economy, whose members were drawn from private sector, government, academic and leading environmental organizations, recommended that:

> *Individual companies should adopt and implement environmental principles and policy guidelines ... Special efforts should be made by industry and trade associations to encourage small and medium sized businesses to adopt such principles and guidelines.*
>
> *Industry associations can achieve better integration of environmental concerns by adopting code of practice to govern and guide industrial decision making. Code of practice can be used to establish internal goals and performance standards for industry on environmental matters which go beyond minimum regulatory requirements while maintaining sensitivity to costs and other economic factors. Industry is best able to assess its own capabilities and opportunities and should be given incentives and recognition for improving environmental performance.*

Corporations show leadership by fulfilling their responsibility to conserve resources and protect the environment. All corporations should adopt a code of practice which enshrines this responsibility.

Some trade and industry associations and

companies have already a adopted code of practice.

For those who have not, and would like some help in doing so, a generic code of practice checklist has been developed, based on the principles and guidelines of Sustainable Development.

The checklist consists of a number of self-assessment questions for each of the 23 business areas (see opposite page). Its aim is to provide guidance in developing a code of practice tailored to individual businesses. Not all of these questions are applicable to all businesses. The checklist is not meant to be all-encompassing. The questions should, however, provide a firm foundation for the development of a code of practice.

In going through the checklist, it will be a matter of identifying questions which are pertinent to your business. For example, a service company which does not manufacture products would likely omit business area's related to product development and improvement and purchasing practices.

While you may not know the answers to some of the questions within the context of your operations, this may be revealing in itself and may lead to further action. It is possible that you may receive assistance from others in the industry or the services of a professional consultant.

Just thinking about these questions is the first step, and probably the most important one, in beginning the process of integrating Sustainable Development into the fabric of your business.

A sample code of practice is available from the Sustainable Development Coordination Unit, a branch of the Manitoba Provincial Government and from a number of business organizations.

The following 23 areas have been identified as important and should be considered in developing a code of practice tailored to individual businesses.

1 Business Aims & Strategies
2 Management Systems
3 Staff Education & Training
4 Workplace & Office Practices
5 Recognition & Reward Systems
6 Information Sharing
7 Compliance with Appropriate Legislation
8 Product Development & Improvement
9 Purchasing Practices
10 Production, Manufacturing & Service Processes
11 Materials and Waste Management
12 Energy and Water Management
13 Marketing
14 Building Design & Construction
15 Technologies
16 Investment & Lending Decisions
17 Risk Management (Public Liability)
18 Co-operative Business Relationships
19 Community Involvement & Responsibility
20 Regional & Global Responsibilities
21 Emergency Preparedness
22 Biological Resource Use
23 Resource Management

1 Business Aims and Strategies

If companies are to develop in a sustainable manner, they must make a critical analysis of their philosophy and formulate a set of Sustainable Development goals. Strategies which affect all aspects of a business will follow.

An analysis of the existing situation (where do we stand?) can be taken as a starting point in determining the company's goals (what do we want to achieve?) and in formulating medium-term policy (what steps should be taken?).

Questions	*Yes*	*No*	*N/A*
Do you have a Sustainable Development policy?			
Have your company's objectives been developed with due regard for Sustainable Development factors?			
Are Sustainable Development considerations (energy and resource use, CFC's, toxic, waste generation, land use, etc.) taken into account in process and product/service planning decisions undertaken by your company?			
Does your planning horizon consider the long-term impacts of decisions regarding your products/services on the environment and economy?			
Do you consider the long term cumulative impacts of your products and processes on the environment and economy?			
Do the company's environmental and economic objectives coincide?			

2 Management Systems

These must ensure that Sustainable Development attitudes are introduced, fostered and reinforced throughout the company, because of increasing environmental and economic risks.

Business must consider the environmental and economic impacts of management procedures as they relate to:

product design and function
manufacturing procedures
raw materials
plant location and capacity
marketing approaches
pricing
procurement
promotion and sales
warehousing
physical distribution channels
inventory management
transportation
waste management
energy consumption

Questions	*Yes*	*No*	*N/A*
Has a Sustainable Development manager or an individual with responsibility for Sustainable Development been appointed?			
Has a technical committee for Sustainable Development matters been established?			
Are *all* levels of management sensitive to Sustainable Development issues?			
Have Sustainable Development activities and monitoring progress been planned?			
Has a waste minimization and recycling plan been developed?			
Has a waste audit been carried out?			
Does the organization enable the implementation of strategies?			
Has an environmental emergency response plan been developed?			
Have monitoring systems been developed?			

3 Staff Education and Training

A company stands or falls by the capability of its workforce. An increasingly competitive global marketplace places a premium on attracting and keeping well trained and motivated staff. Efforts by business to ensure that staff are being informed and educated about the global changes affecting them, such as Sustainable Development are vital.

If a company with well-established organizational structures and procedures is to successfully adopt Sustainable Development, then it must show leadership and commitment at all levels of the organization. This will eventually translate into a 'business as usual' approach where it becomes the norm for employees to consider the environmental implications of their day by day activities.

Staff need to be shown ways in which Sustainable Development affects the company and how they can apply a code of practice to their specific tasks.

Questions	*Yes*	*No*	*N/A*
Is information on Sustainable Development readily available to employees?			
Are training courses planned for employees dealing with Sustainable Development issues?			
Are employees encouraged to participate in training programs?			
Have apprenticeship and other overall staff training been extended to include Sustainable Development training?			
Are opportunities provided for Sustainable Development counselling in employees' households?			
Are workers given tips/advice on practical environmental protection?			
Are employees trained for environmental emergency response?			

4. Workplace and Office Practices

Sound Sustainable Development workplace and office practices are necessary to foster confidence and goodwill with both the public and employee. By making relatively small changes in procedure, large overall impacts can be made in reducing waste and conserving energy and other natural resources.

Appropriate changes can reduce business costs, and create both safer and more pleasant working environments.

Questions	*Yes*	*No*	*N/A*
Do you have purchasing and resource management policies to lessen the impact of business operations on the environment?			
Are low-pollution, energy efficient vehicles being purchased and used?			
Are efforts being made to re-equip existing vehicles and service them with S-D considerations in mind?			
Are vehicle drivers being encouraged to adopt energy efficient driving ?			
Are journeys and meetings planned with S-D alternatives such as tele- and video-conferencing in mind?			
Is the use of hazardous substances avoided at the workplace?			
Is an office/workplace waste minimization policy in place?			
Have efforts heen made to organize collection of recyclable materials?			
Does your parking policy encourage employees to use public transit, ride share, cycle or walk?			
Have you investigated utilizing alternate and renewable fuels?			
Have recycling receptacles been provided for the convenience of employees and customers?			

5 Recognition and Reward Systems

Employees will become more enthusiastic about Sustainable Development if they see it benefiting their own work and realize its importance to the environment and the company's economic future. Information, recognition and a system of acknowledgements can go a long way in fostering this attitude among employees.

Questions	*Yes*	*No*	*N/A*
Do the reward systems within your company reflect Sustainable Development principles?			
Is there some form of recognition system in place to acknowledge employees who have shown Sustainable Development awareness?			
Is there a system in place to reward scientific and technological innovations in the area of Sustainable Development practices?			
Have efforts been made to honour employees who have distinguished themselves within the company with respect to Sustainable Development, for example nominating them for recognition awards from other organizations?			

6 Information Sharing

Better ideas come from a convergence of many viewpoints. The transition to Sustainable Development will require a continuous supply of imaginative ideas.

One method of collecting these ideas is to share approaches and success stories - perhaps even failures - with other association members or colleagues. The media should be considered as a valuable asset in disseminating the message of the company's commitment to Sustainable Development.

Questions	*Yes*	*No*	*N/A*
Are public relations statements on Sustainable Developmentable to stand up to public scrutiny?			
Is your company providing customers with straightforward pertinent information on the potential risks and consequences associated with your products/services?			
Are reports on the company's Sustainable Development activities appearing in the media or in other information sources?			
Is the media being supplied with your advances in Sustainable Development technology?			
Are details of quality products and services included in press releases dealing with the company's Sustainable Development activities?			
Do you liaise with industry members and government on new innovations relative to the 4R's of waste management employed of your manufacturing operation?			
Is your company cooperating in exchanging information regarding potentially dangerous properties of your products?			

7 Compliance with Appropriate Legislation

Compliance with legislation and regulation is a wise business practice, both to avoid the potential difficulties associated with violations and also to send a strong message about the commitment of the firm. Government regulations, as well as those that industry associations establish, can prove useful in gauging how greater improvements in performance can be achieved.

Questions	*Yes*	*No*	*N/A*
Are programs and practices in place to ensure compliance with pertinent legislation and regulations?			
Have steps been taken to comply with official regulations?			
Have company guidelines been introduced for environmental protection?			
Does your company monitor the effects of its operations on the environment?			
Have you explored the Workplace Hazardous Materials Information System (WHMIS) program?			
Are appropriate records being kept?			
Are all materials being marked and stored properly?			
Have work inspections and safety regulations been organized and applied?			
Has an emergency preparedness plan been formulated in case of environmental accidents?			
Have the company's suppliers and contractors been asked to sign agreements to provide products and services with minimum negative impact on the environment, to inform the company of remedial action and methods of neutralizing pollution, and to take responsibility for waste materials originating from the product or service supplied?			
Is waste disposal in compliance with the law?			

8 Product Development and Improvement

The purpose of product development and improvement is to adapt the company's range of goods and services to the needs of the market. The "needs of the market" are in many cases synonymous with the "needs of the environment", certainly for products which are subject to regulation or to critical appraisal by the consumer. For products where the pollution potential is less obvious, product development and improvement should take into account Sustainable Development aspects, as that is the level where decisions are made in the selection of materials and processes.

Questions	*Yes*	*No*	*N/A*
Are your products durable?			
Are your products re-usable and recyclable?			
Do you incorporate recycled materials into your products?			
Are your products efficient in their use of energy?			
Are your product specifications based on life cycle environmental analysis?			
Do you regularly identify opportunities to improve your products in order to lessen their impact on the environment?			
Does your production process involve the use of non-regenerable raw materials?			
Are there opportunities for substituting renewable resources for non-renewable resources in your production process?			
Are efforts made to find substitutes for hazardous substances in your production process or products?			
Are efforts being made to introduce standardization and reduce the range of parts used?			
Are products designed to minimize waste?			
Have you adopted methods to reduce the post consumer environmental impact of your products?			

9 Purchasing Practices

The materials management department of a business is responsible for supplies and disposal of materials. It ensures that the business is able to produce and deliver goods economically, and covers all value-added stages from purchasing to sales. It is responsible for purchasing both consumer and capital goods, which often account for the majority of a business' costs. The material and other products purchased can be harmful, neutral or advantageous to the environment and/or economy.

Questions	*Yes*	*No*	*N/A*
Do you have a purchasing policy based on Sustainable Development principles and guidelines?			
Do you do business with suppliers who are recognized as using Sustainable Development practices and procedures?			
Are your purchasing personnel kept informed of the latest innovations in products and services relative to sound Sustainable Development practices and products which meet with environmental standards?			
Has market research been conducted into the possibility of replacing harmful products?			
Are suppliers prepared to reveal data relevant to the impact of their products on the environment?			
Have you established whether suppliers are prepared to use re-usable/returnable packaging?			

10 Production, Manufacturing and Service Processes

Production and manufacturing technology covers all plant and machinery used for the processing of raw materials and semi-finished goods. It generally plays a decisive role in allocating the level of emissions from a factory.

Sustainable Development helps to reduce pollution and has economic advantages in that it reduces the input of materials, water and energy and the disposal costs for waste and sewage. It may also improve product quality and reduce production waste. In the medium term, effective Sustainable Development measures can also bring about an improvement in respect for the company by neighbours, customers and authorities.

Questions	*Yes*	*No*	*N/A*
Are the processes employed in your manufacturing operations energy efficient?			
Are your manufacturing processes resource efficient?			
Are the 4R's of waste management employed within your manufacturing operations?			
Are new and efficient processing technologies adopted within your company as soon as they become available?			
Do you have an on-going contingency plan/fund set aside for the implementation of new technologies, such as energy conservation, pollution control machinery, equipment, etc.?			
Are opportunities to improve the energy and material processing efficiencies within your manufacturing facilities regularly identified and acted upon?			

11 Materials and Waste Management

Environmentally acceptable waste disposal and the extensive use of recycling have become important factors in decision-making at all levels of business activity. Many businesses already take these aspects into account at the product development stage, in the selection and development of manufacturing processes and in the purchasing of materials.

Questions	*Yes*	*No*	*N/A*
Are efforts made to improve the end use efficiencies of water, energy and other resources consumed in your operation?			
Do your effluent streams (air, water, waste) meet provincial/federal guidelines for conventional and toxic contaminants?			
Are the toxic chemicals used or generated in your operation managed in accordance with the cradle-to-grave policy of responsible care?			
Are the 4R's of waste management employed in your operations?			
Are opportunities to lower or reduce the toxicity of chemicals used or generated within your manufacturing processes identified and acted upon?			
Are environmentally hazardous materials being replaced in your production process?			
Are more environmentally sound materials being used for general purposes?			
Does materials storage take into account the potential risk to the environment?			
Is hazardous waste avoided by eliminating the creation of harmful residues during production?			
Have hazardous or special waste disposal companies been checked for reliability?			

12 Energy and Water Management

Energy and water costs can be decisive factors affecting competitiveness. Determining energy and water consumption in a company can generate new ideas for optimizing your production process. If energy and water are consistently well managed, there are bound to be savings in costs and raw materials.

Questions	*Yes*	*No*	*N/A*
Are efforts being made to improve the efficiencies of water and energy consumed by your business?			
Do you know where the company consumes most of its energy and water?			
Have people been appointed to be responsible for energy and water management in a particular workplace, area, workshop or departments?			
Have energy and water-saving measures (both short and long term) been implemented?			
Have you investigated and evaluated energy retrofit measures to achieve reductions in energy use, lower operating costs, a more efficient operation and cleaner or reduced emmissions?			
Are you aware of the energy audit services provided by the Provinical Government?			
Have you investigated utilizing alternative energy fuels from both an environmental and economic perspective?			

13 Marketing

Marketing means gearing business to take advantage of the market. It must be focussed on solving customers' problems and achieving the company's long-term objectives of profit and security.

Increasingly, Sustainable Development factors are becoming important to success in marketing. More stringent environmental legislation and increased ecological awareness on the part of customers brings considerable risk but opens up new opportunities for the marketing of goods and services. Sustainable Development marketing concepts have to be developed not only for reasons of social responsibility but to also ensure that the company remains competitive.

Questions	*Yes*	*No*	*N/A*
Have marketing objectives been determined with regard to the principles and guidelines of Sustainable Development?			
Have marketing objectives been planned in an integrated fashion?			
Are claims made in advertising media valid in terms of the impact of your product or service on the environment?			
Are your business practices consistent with the marketing of a product or service which meets good environmental standards?			
Have you promoted the Sustainable Development orientation of your business to your customers as part of your marketing plan?			
Are the materials used in your marketing campaigns sensitive to environmental and Sustainable Development issues?			
Have efforts been made to check and adjust marketing organization and control systems to support Sustainable Development?			

14 Building Design and Construction

One necessary aspect of company activity is investment in buildings for production, marketing, administration and other areas of the business. Regardless of its size, every structure impinges on the environment in the broadest sense. Buildings serve to meet working requirements, but to also present and promote the firm's image, market profile and status. Buildings can also boost employee morale. Both economic and environmental aspects of building design are important business concerns. Environmental considerations and energy efficiency should be an integral part of the design process.

Questions	*Yes*	*No*	*N/A*
Has preliminary planning included environmental impacts?			
Has an environmentally sound building concept been formulated?			
Are minimum-pollution building materials being used?			
Have environmental aspects, including energy conservation, been taken into account when planning fittings and installations and equipment?			
Have efforts been made to make the building's surroundings as natural and aesthetically pleasing as possible?			
Has an audit been completed on the buildings to ensure energy efficiency?			

15 Technologies

Technology means many things to different people. It can drive an industry into new products or it can be used to expand marketing opportunities for more traditional products and services. Technology can be sophisticated or it can be simple.

Sustainable Development requires new technologies to be developed and applied to areas where environmental improvements can be readily integrated into daily operations. These technologies also extend beyond the business and into the marketplace, thereby, making significant contributions towards Sustainable Development.

Questions	*Yes*	*No*	*N/A*
Can hazardous raw materials or parts of the production process be eliminated or replaced with other technologies which cause less pollution?			
Can temperatures be reduced in wet processes?			
Can dry processes and cooling of workpieces be avoided?			
Can fuels be prepared or handled for optimum combustion?			
Can environmentally sound additives, which improve the yield from raw materials and/or reduce emissions, be introduced?			
Can emissions during delivery, storage, crushing and mixing of dust-producing substances be prevented?			
Can technologies with a better input-output ratio be used?			
Is modern measuring and control technology being used?			
Can leakage and faults causing emissions be reduced?			
Can energy efficiency be increased?			
Can useful materials and heat be recovered?			
Are new technologies regularly reviewed for application?			

16 Investment and Lending Decisions

A company has financial flexibility in terms of how and where funds are placed. In pursuit of diversification or other methods of stabilizing market revenue streams, many businesses have the opportunity to review the issues related to Sustainable Development.

The financial approach which a business may take can open areas where the commitment to Sustainable Development can be demonstrated.

Questions	*Yes*	*No*	*N/A*
Is investment planning geared towards protecting the environment while enhancing the firm's production capability?			
If a particular investment is likely to increase pollution or resource degradation has research been done to find a lower-pollution alternative?			
Have all the likely costs caused by additional pollution been properly included in project costing?			
Are loans made or taken conditional on meeting certain standards of environmental protection?			
Are you aware of the environmental performance standard demanded by the lending agencies with which you do business?			
What steps have been taken to ensure adequate financing for mitigation of past or future impacts?			

17 Risk Management (Public Liability)

Risk management is more than just being able to sell enough product to maintain the viability of a company. It also means minimizing environmental impacts. Both financial risk and physical risk must be considered within the operations of a company that is practising Sustainable Development.

Questions	*Yes*	*No*	*N/A*
Have your carried out an environmental impact assessment for all parts of the operation?			
Have guidelines been introduced for environmental protection?			
Are you monitoring environmental impact and keeping complete records?			
Are all materials labelled and stored properly?			
Have work inspections and safety regulations been organized and applied?			
Has an emergency preparedness plan been formulated in case of environmental accidents?			
Have the company's suppliers been asked to sign agreements to provide products with minimum negative impact on the environment, to inform the company of possible remedial action and methods of neutralizing pollution, and to take responsibility for waste materials originating from the product supplied?			
When purchasing property has a clause been included in the agreement to ensure that the property is guaranteed to be free of any pollutants?			
Is waste being disposed of in compliance with the law?			
When using contractors, have their business and environmental policies been checked?			
Is the company providing customers with clear information on the potential risks associated with its products?			

18 Co-operative Business Relationships

Business groups and associations can be valuable sources of information and advice to any business. A business will want to select associations that will help it progress on Sustainable Dvelopment.

Questions	*Yes*	*No*	*N/A*
Does the business organization have a committee responsible for Sustainable Development?			
Is it effective?			
Is the association supportive of Sustainable Development in its activities?			
Can you learn new ways of business practice and conduct from the organization?			
Is the group aware of and responsive to local issues and needs?			
Does the association have training programs to assist its members in moving towards Sustainable Development?			
Does the association release information on Sustainable Development initiatives of its members?			

19 Community Involvement and Responsibility

Business is a major part of the social and cultural fabric of the community. At the same time it is often difficult to determine the appropriate role which a business can and should take in promoting community goals.

A company can position itself in the community if it chooses to take initiative and a leadership role on Sustainable Development. Sponsorship of activities and general promotional support are important methods of showing this leadership.

Questions	*Yes*	*No*	*N/A*
Do you involve local residents in business decisions which have a significant impact on the community?			
Do opportunities exist for sponsorship of local activities to further Sustainable Development interest in your community?			
Do you participate in local public discussions on matters that affect the environment?			
Do you support local Sustainable Development events such as Earth Day?			
Do you have a designated community service or public relations person to meet with public groups?			

20 Regional and Global Responsibilities

The actions that we take locally can, and often do, have a profound impact on the global environment. In the same way economic activities taken in other countries can have repercussions on local businesses.

Businesses can meet this global responsibility by adopting responsible standards in their local and export activities.

Questions	*Yes*	*No*	*N/A*
Do your goods intended for export meet the same quality requirements and health, safety and environmental standards as those intended for the domestic market (unless there are more stringent requirements in the importing country)?			
Have steps been taken to provide straightforward information and technical training programs for offshore purchasers and users to enable them to use, transport, store and dispose of the goods safely without endangering the environment or human health?			
Will manufacturing in a foreign production plant be restricted or discontinued if this becomes necessary for the protection of the environment or the health of the inhabitants of the country in which the plant is situated?			
Does the foreign producer of industrial goods or agricultural products apply the same standards of plant safety, the same maximum pollution emission levels and the same requirements in other areas affecting human and environment health as are prescribed in the home country for comparable industrial or agricultural production?			
Have efforts been made to obtain supplies from more ecologically-minded domestic or foreign producers?			
Do you regularly review developments in your export markets and make your concerns known to relevant government agencies?			

21 Emergency Preparedness

As products and services become more complex, so too have the number and types of chemicals used by business. Even in the case of the most common types of chemicals and procedures, certain conditions can create dangerous situations and require speedy and accurate responses.

Business has both a legal requirement and a social obligation to maintain preparedness to deal with emergency situations that arise from its own activities. It also should be prepared to help in situations that arise which might affect its operations even if the cause is external.

Questions	*Yes*	*No*	*N/A*
Have you prepared an emergency preparedness plan and are your employees fully aware of their responsibilities if an accident does occur?			
Do you maintain a register of all chemicals used in your plant and have trained staff able to respond to an accident?			
Do you know of any external accident potential that may damage your company or cause you peril?			
Are you able to help out with equipment or facilities in the event that a disaster happens in your community?			
Are there types of emergency equipment that you can share with neighbouring businesses to increase your margin of safety?			

22 Biological Resource Use

Biological factors as additives and process inputs are becoming increasingly common in modern industry. Maintaining a current update of biological factors can make a business aware of the impact that it has on the immediate environment.

Questions	*Yes*	*No*	*N/A*
Do you use biological materials that may present a hazard if an accident occurs?			
Do you dispose of biological waste safely?			
Do you monitor the effect your operations may have on the wildlife surrounding your operations?			
Do you support any wildlife conservation or related groups in your community?			
Do you store biological materials safely and securely?			

23 Resource Management

Care and management of resources is a critical concern within modern business. Management of natural resources concerns more than the financial benefit that careful husbandry of resources can provide. It can often expose areas of further opportunity and also indicate new markets for existing products.

Questions	*Yes*	*No*	*N/A*
Do you keep track of the quantity and volume of resources that your business consumes?			
Do you attempt to identify and implement new approaches which reduce the quantity of natural resources which are lost during harvesting/processing?			
Do you attempt to rehabilitate resource wastes that emerge from your operations?			
Do you participate in resource management initiatives at the local level?			
Do you support groups interested in resource management issues?			
Do you practice conservation of non-renewable resources?			
Are there opportunities for resource substitution for scarce resources?			
Do you make a financial contribution to the mitigation of damage to the natural environment by the harvesting of the resources used by your business?			

Notes

7 A Review Process

Decision Makers in all sectors have indicated that a periodic review of decision making processes are a valuable tool for monitoring and evaluating organizational processes and practices.

This chapter looks at a review of a government sector procedure for reviewing energy projects. The review first outlines the steps in the decision making process and then looks at some suggestions for improvement.

What follows is taken from the study, by Glenn Bridges, of the British Columbia government's Energy Review Process, undertaken for the British Columbia Round Table on the Environment and the Economy.

Provincial Jurisdiction Related to the Energy Sector

British Columbia has three project review processes that directly or indirectly involve energy production, transmission or use:

- Energy Project Review Process
  (legislated process)
- Mine Development Review Process
  (non-legislated review process)
- Major Project Review Process
  (non-legislated review process)

Energy Project Review Process

The British Columbia *Utilities Commission Act* provides for the regulation of public utilities (such as BC Hydro), investor-owned utilities (such as West Kooteney Light and Power) and natural gas utilities (such as BC Gas, Columbia and PNG). Westcoast Energy is regulated by the National Energy Board.

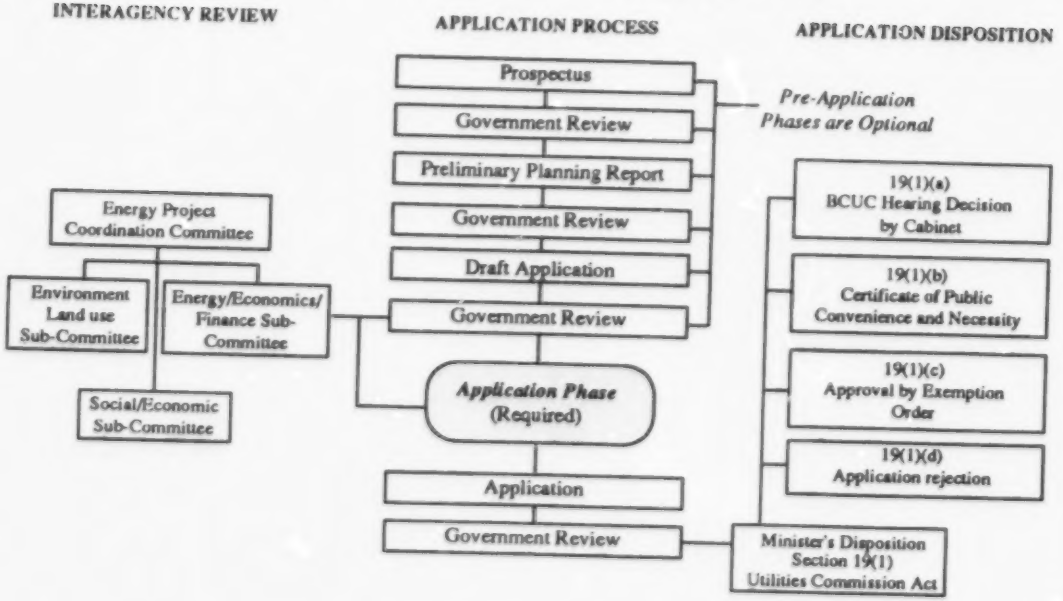
The *Act* empowers the Minister of Energy, Mines and Petroleum Resources and the British Columbia Utilities Commission to review and approve energy projects which generate, transport, store and use large quantities of energy - including the removal of energy resources from the Province.

The *Act* established the Energy Review Process, which applies to "regulated projects" - which are projects that involve:

Electricity generation projects of 20MW or more;
Transmission lines of 500kV or more;
Pipelines capable of transporting 16 petajoules of energy per year;
Facilities capable of storing or shipping 3 petajoules per year;
Facilities capable of using 3 petajoules per year;
Projects designated by cabinet.

The following table describes the application, review and disposition process under the Energy Review process.

Table 5 Energy Review Process Flowchart



Objectives

- Early identification and management of environmental, economic and community impacts.
- Guidance to proponent in obtaining permits and licenses and coordination and realistic staging of government regulatory appprovals.
- Determination of financial and economic viability where public sector investment or significant impact management programs are involved.
- Coordination by inter-agency steering committees providing one major contact point between proponents and government.
- Proponent initiatives consultation process - British Columbia Utilities Commission may be asked to hold Public Hearings.

Information Requirements

- Applicant and project description.
- Project justification (technical, economic and financial feasibility).
- List of approvals and permits (water, waste, gas utility, boiler/pressure).
- Site/route selection (alternatives, mitigation

and compensation proposals).

- Biophysical/land use information (air quality, vegetation, agriculture, forests, recreational resources, aesthetics, water, wildlife, land use).

- Socio-economic information (labour requirements, impacts upon social services, financial implications upon local government).

Approval

- Energy Project Certificate:
  Approval for construction granted by cabinet
  Contains terms and conditions

- Energy Operation Certificate:
  Approval for operation granted when conditions are implemented

- Ministers' Order:
  For approval of projects that have not been subject to hearings
  Contains terms and conditions
  Signed by both the Minister of Environment and the Minister of Energy, Mines and Petroleum Resources.

Mine Development Review Process

The Mine Development Review Process (MDREP) is a non-legislative procedure for new and expanded

mining ventures, administered through the Mine Development Steering Committee under direction of the newly created Cabinet Committee on Sustainable Development.

The Mine Development Steering Committee (consisting of officials from the Ministries of Energy, Environment, Municipal Affairs, Transportation and Highways, Regional and Economic Development and Native Affairs) has recently delegated the review of small projects to regional committees, known as the Regional Mine Development Review Committee.

The goals of the MDRP are similar to those of the Energy Project Review Process: to ensure that the projects are technically sound and publicly acceptable and have environmental, socio-economic and community issues that are adequately addressed and that the process expedites the review and decision making in order to minimize project delays.

Major Project Review Process

The Major Project Review Process (MRED), introduced in 1989, is a non-legislated review procedure supported by the *Environment and Land Use Act* and the *Environmental Management Act* administered through a Major Project Steering Committee and co-chaired by the Ministries of Regional & Economic Development and Environment.

The Steering Committee includes representation from the Ministries of Forest, Energy, Mines & Petroleum Resources, Municipal Affairs, Environment Canada and the Federal Environmental Assessment Review Office (FEARO).

Major projects which previously fell outside of

existing processes, generally fall into four categories:

(1) pulp and paper production;
(2) mineral smelting and refining;
(3) chemical production; and
(4) major ports and marinas.

The Major Project Review Process follows a similar process to the Energy Project and Mine Development Review processes.

Decision-making Processes: Areas of potential Improvement

Implementation of Environmental Objectives

- Although the Energy Project Review Process is one of the best energy review procedures in Canada, it depends upon timely input from all Ministries to provide direction and decisions to avoid costly delays to the project proponent.

- Recently proposed natural gas and coal-fired generating projects have pointed out the need for clearly defined environmental objectives for project planning purposes, which is critical to the financial feasibility.

- The process of setting clear quantitative environmental objectives must be established and understood by all government officals and project proponents.

Energy Project, Mine Development and Major Project Review Processes

- The Ministry of Energy, Mines & Petroleum Resources (MEMPR) is currently reviewing its Energy Project Review Process.

- The Mineral Resources Division of MEMPR is considering legislation to support its Mine Development Review Process.

- The Ministries of Environment and Regional & Economic Development are similarly considering legislation to support their Major Project Review Process.

- It is suggested that consideration be given to having one legislated environmental review process, similar to the proposed federal Canadian Environmental Assessment Act (CEAA), that would maintain line ministry responsibilities.

Federal and Provincial Environmental Co-ordination

- The introduction of the recent federal environmental assessment bill suggests that provincial review procedures should consider integrating federal requirements to minimize regulatory duplication.

- In cases of joint mandates and jurisdictions, only one review should be conducted, taking

into account the requirements of all affected jurisdictions.

- The area of improved federal/provincial environmental assessment should be addressed in order to achieve efficient co-ordination of review procedures.

- Under the Council of Provincial Energy Ministries, British Columbia is taking the lead in preparing a review of provincial environmental assessment procedures, eventually leading to a provincial position with respect to the federal proposed legislation.

Related Issues

- Through potential Energy Cooperative agreements between British Columbia and Alberta (and the other Western Provinces through the Western Premiers' energy initiative) and the Energy Cooperation Agreement between British Columbia and the State of Washington (signed April, 1989), coordinated environmental objectives may offer the potential to improve energy planning and the environment (i.e. transboundary fossil fuel emissions).

- Energy coordination with the Western North American power system potentially offers a least-environmental impact resource option, second only to energy conservation.

Energy Export Markets

- California's gas and electricity demand is expected to increase dramatically in the 1990s due to lack of low-cost alternatives, air quality concerns and growth in their economy.
- Currently, lack of natural gas pipeline and electricity capacity is constraining export sales, but this is expected to change over the next several years.
- Export of thermal-electricity effectively results in the importation of natural gas and coal combustion emissions.

Electricity Pricing

- The British Columbia Utilities Commission (BCUC) reduced BC Hydro's rate application of 3 per cent over 3 years since it believes that price alone is not effective in achieving BC Hydro's conservation objectives.
- BCUC ordered BC Hydro to make an application for rate design by December 1, 1990 which, among other objectives, tried to achieve energy conservation through rate restructuring.

Repatriation of the Columbia River Treaty Downstream Benefits

- The USA is obligated to return British Columbia's 50% entitlement of the Columbia River Treaty Downstream Benefits (DSBs) starting in 1998 to 2003.
- The transboundary environment implications of British Columbia taking back the DSBs have not been addressed.

Independent Power Producers

- BC Hydro and its export subsidiary, Powerex, have issued requests for proposals to supply the domestic market and export markets by independent power producers (IPPs).
- IPP projects most likely to proceed are in the main coal, natural and biomass-fired thermal generation.

The Value of a Review Process

The brief outline above illustrates the value of a review process. The review by Glen Bridges discovered: bottlenecks in the system; confusion about objectives and duplication of efforts - in spite of the fact that the process was considered one of the best in Canada.

In attempting to incorporate environmental objectives into your organizational procedures, a periodic review will ensure that your efforts and commitment are achieving maximum effect.

Notes

8 Procter & Gamble: One Company's Story

Procter & Gamble explain how Sustainable Development principles are incorporated into their product development decisions from "cradle to grave".

A Little Bit of History

The Procter & Gamble Company was founded by two brothers-in-law in Cincinnati, Ohio in 1837. It started as a soap and candle making business. Today, Procter & Gamble makes and markets over 200 well known consumer brands in 47 countries.

In 1915, Hamilton, Ontario became the site of the first international facility for Procter & Gamble. Operations in Canada are now the largest in the P&G world with over 100 brands, and sales in excess of $1.5 billion.

Since 1890, Procter & Gamble has used technological understanding to improve products and processes. It has been this investment in scientific research that has been a cornerstone of the company's success.

The commitment that the Company has to environmental issues stems from that same technological understanding which raises an awareness of the interconnectedness of environmental issues.

While early environmental efforts were focussed

on manufacturing process improvements, the emergence of water quality issues in the Great Lakes in the 1960's prompted the company to take a leading role in the development and use of biodegradable surfactants in cleaning products, and in limiting the use of phosphates in detergents.

The Corporate Mission

Procter & Gamble's statement of purpose and strategy states:

> *We will provide products of superior quality and value that best fill the needs of consumers.*

In the 198O's, the environment ceased to be an issue of concern only to scientists and activists. Consumers demanded that the products they used become more "environmentally friendly". Thus in the 80's, a new consumer need emerged: the need to be environmentally conscious.

As a first step in addressing this new consumer need, P&G developed a policy which would govern their actions:

ENVIRONMENTAL QUALITY POLICY

Procter & Gamble is committed to providing products of superior quality and value that best meet the needs of the worlds consumers. As part of this, Procter & Gamble continually strives to improve the environmental quality of its products, packaging and operations around the world.

To carry out this commitment, it is Procter &

Gamble's policy to:

- *ensure our products, packaging and operations are safe for our employees, consumers and the environment;*
- *reduce or prevent the environmental impact of our products and packaging in their design, manufacture, distribution, use and disposal whenever possible;*
- *meet or exceed the requirements of all environmental laws and regulations;*
- *continually assess our environmental technology and programs and monitor progress toward environmental goals;*
- *provide our consumers, customers, employees, communities, public interest groups and others with relevant and factual information about the environmental quality of P&G products, packaging and operations;*
- *ensure every employee understands and is responsible and accountable for incorporating environmental considerations in daily business activities;*
- *have operating policies, programs and resources in place to implement our environmental quality policy.*

The development of the environmental quality policy fits well with the overall corporate mission and with the concepts of "Total Quality":

- do the right thing the right way the first time;
- search for ways to continually improve.

This meant that the environment was not a project for a new department but, rather, it was a shared responsibility of all employees. Environmental thinking had to be incorporated into all aspects of work.

Policy to Action - Setting Priorities

Having identified that the environment was a new consumer need, and the principles from which environmental issues would be managed, priorities needed to be assessed and resources allocated.

Thus a team of executives and senior managers was formed called the Environmental Quality Team (EQ Team). They determined that the company could make its greatest contribution by concentrating on the issue of solid waste management.

Care had to be taken to ensure that the environmental initiatives taken would improve the environmental impact of a product or package - not merely pander to common misperceptions. For example, knowing that in a landfill no appreciable amount of biodegradation occurs, deterred P&G from putting efforts behind the development of biodegradable plastics.

Knowing that no "magic pill" existed which would make solid waste simply disappear and, faced with a consuming public that was demanding immediate results, the EQ team had its work cut out in setting internal priorities.

The EQ team identified those brands which would take a lead role with innovations and those which would work toward continual improvement.

The brands taking the lead role had some common

characteristics:

- greatest opportunity to reduce their impact;
- technology available to effect a meaningful change;
- changes were economically viable;
- changes fit with consumers needs for the product.

That is, the Company was able to create a "win/win" for consumers *and* the environment instead of making trade-offs.

In some cases, trade-offs between the characteristics were necessary and these cases required further study and, in some cases, the development of technologies and strategic alliances with other industries in order to make changes.

What Can One Company Do?

Turning policy to action is not an easy task. P&G found that there were, fundamentally, five actions it could take:

1 ***Reduce waste:*** find ways to reduce the amount of waste generated in the first place throughout the business;

2 ***Provide markets:*** create a market demand for recycled materials by incorporating them into products;

3 ***Design for waste management:*** design products, packages and processes which are compatible with existing and future waste

management program;

4 ***Help develop waste management infrastructures:*** get involved through industry associations and government in the development of waste management systems for the future;

5 ***Communicate:*** provide facts that support informed decision making by employees, consumers, educators, government and special interest groups.

Using these actions as the framework, P&G began the work of reducing its impact on solid waste management systems.

The Initiatives

Reduce Waste

Perhaps the most visible outcome of the Environmental Quality Policy in Canada was the introduction of the Enviropak refill in September 1989. The Enviropak reduced the amount of plastic used to package liquid cleaning products by as much as 80% and encouraged the re-use of the rigid plastic bottle. The Enviropak concept has been used for 8 of the company's brands to date: Mr. Clean, Liquid Spic and Span, Joy, Ivory Liquid, Liquid Tide, Scope, Mr. Clean Magik Spray and Downy.

A less visible but equally important aspect of the policy was the reduction of waste in the manufacturing facilities. By evaluating the nature and causes of waste in the plants, the company's technical staff was able to reduce the production of waste generally

and find markets for the recycling of wastes generated. Not only has there been a significant (77%) reduction in the amount of waste going to landfill, there are real cost benefits.

The introduction of compact detergents represented an opportunity to reduce the amount of packaging required for laundry detergents while at the same time offering consumers and retailers advantages in handling and storage. Ultra Tide, Cheer and Oxydol were the first detergents to offer a concentrated product to consumers.

The elimination of packaging is also an important method of reducing solid waste. This was done with the elimination of the outer carton for Crest toothpaste, Head & Shoulders cream shampoo, Secret antiperspirant and Clearasil acne medication.

In each of these instances, the tube container was redesigned to allow for easier handling and storage at home while retaining the essential product protection characteristics.

The advent of the club store concept in Canada allowed the development of display-ready pallets which eliminated the need for corrugated shipping containers. These stores also promote the use of larger sizes which generally use less packaging materials on a per product use basis then do smaller sizes.

Provide markets

The willingness of the Canadian public to separate wastes for recycling has been demonstrated through a number of curbside collection programs. However, in order for these programs to be commercially viable, the materials collected must have a real market

value or end use.

As a major user of rigid high density polyethylene (HDPE) bottles for its products, P&G was in a position to create a market for the bottles being collected through curbside recycling programs.

The concept was to "close the loop" on plastic bottle recycling by using the bottles collected at curbside to make new bottles. The technology of repelletizing the plastic and blowing bottles, using a combination of virgin and recycled plastic, had to be developed. P&G supplied technical support through its packaging engineers and guaranteed that they would use the recycled plastic in their bottles. As a result, Mr. Clean and Spic and Span bottles today use at least 25% recycled plastic with a goal of moving to 50% in the near future.

In a similar development, P&G supported the development of the technology and collection system for boxboard recycling. Testing culminated in 70,000 Ultra Tide boxes containing post-consumer recycled boxboard being shipped to the market in June 1991.

All P&G detergent cartons have been made from post-*industrial* recycled boxboard since the early 1980's. Even so, the Company is committed to the use of post-*consumer* recycled boxboard in its cartons as soon as consistent supply lines can be established.

Design for Waste Management

The elimination of heavy metals used in the printing inks for packages is one way in which P&G has designed for waste management. The removal of the heavy metals from inks provides for safer incineration of materials and removes the risk of heavy metal contamination in other types of waste processing.

With a view to the future, P&G has invested heavily in a research program to find a compostable material for the outercover on its paper diapers. Prototype materials are currently being tested in two US cities which have municipal scale composting facilities.

Develop Waste Management Infrastructures

In order to meet the goals of Canada's environment ministers for integrated waste management, all sectors must work together to develop the infrastructures.

Provincial associations of industries such as OMMRI, Collecte Sélective Québec and the Nova Scotia Resource Recovery Fund are all working toward better management of solid wastes. P&G has been a strong supporter of these organizations from their inception and has encouraged its suppliers and other industries to join in making these organizations strong and effective.

P&G has also been instrumental in advancing municipal scale composting as a waste management technology in Canada and around the world by providing financial support to municipal pilot facilities and research projects.

As much as 60% of the household wastes currently sent to landfill is organic and, therefore, compostable. Composting has the potential to significantly reduce the burden on landfill facilities and turn organic wastes into a useful end product, humus.

As a founding member of the Composting Council of Canada, P&G has brought together other consumer goods companies, waste haulers, composting equipment suppliers and all levels of government.

The Council is developing standards for the operation of large scale composters and for the finished product quality of the compost itself.

Communicate

Communication is key to mobilizing people and resources to address issues. There are several groups of people P&G has focused on in its environmental communications.

Employees must understand the issues facing the company in order to help solve the problems and represent the company's position with others. Through the internal employees' magazine, a specially produced video, and leaflets about particular issues, employees have been provided with information about the projects the company has undertaken.

Consumers have been given information about the products they purchase through package labels, informational flyers delivered by direct mail and advertising in all media.

Government at all levels needs information so that appropriate action can be taken. P&G has played an active role in a number of industry associations which participate in these government activities. In addition, P&G has been represented on the National Packaging Task Force and in various industry sectors for the EcoLogo program.

Environmental and Consumer Groups represent special interests and often provide insights for the company in addressing specific issues. At the same time, they have needs for information which go beyond general interest. P&G has maintained a dialogue with several environmental groups as a way of expanding the information base of both.

Teachers and students alike want to study the issues and educate themselves on the choices available. P&G developed an educational kit for use in grades 4-6, called, Planet Patrol. In addition, in conjunction with 8 other sponsors, Pollution Probe, Ontario Waste Management Corporation and the Metro Toronto Public and Separate School Boards, P&G has helped with the development of an educational kit called, *Earth Angels*. Both of these kits help to fill the void of educational materials available to educators.

What Does the Future Hold?

The management of environmental issues is not new to Procter & Gamble. During the late 1980's and into the 1990's the public profile of environmental issues has been heightened. It is clear that the environment is not a passing fad.

In Canada and around the world, companies will come under increasing scrutiny for their environmental ethics.

P&G's recent focus has been on the management of solid waste issues. In the future, P&G will place more emphasis on air, water and energy issues in addition to continuing its efforts to reduce solid wastes.

It is only with the concerted efforts of companies, government and the general public that we will achieve truly Sustainable Development.

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Decision Making Practices for Sustainable Development

One of the major challenges facing the National Round Table is the integration of Sustainable Development concepts and practices into the decision making processes of Canadian institutions.

A major resource available to the NRTEE is the experience already gained by both the public and private sector organizations in formulating and implementing environmental projects, programmes and policies for Sustainable Development. This book draws on the insights of many of those decision makers.

The National Round Table has another major resource and that is the ongoing dialogue between itself and its provincial counterparts, which also has resulted in important contributions to this book.

We hope that decision makers in both the private and public sector will find this book useful as they attempt to apply environmental considerations to the decision making process of their organisations.

NATIONAL ROUND TABLE SERIES
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